

# AVEI NEWSLETTER



*Students from Udavi School learning to use the compass for dome construction*

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This summer in Auroville has been particularly hot, but the Earth Institute has been busy with construction projects, research, and training courses continuing through the often over 40°C heat.

The Earth Institute has completed several construction projects around Auroville in the last few months, including a social space at Anitya community, an extension project at Realization, the renovation of Priya's pottery workshop, and a front terrace for a house in Dana community.

The team continues to test the potential of lime as a replacement for cement stabilization in CSEB and recently new trials for tadelakt finishes have been attempted.

Please feel free to share this newsletter with your friends and colleagues as we spread the knowledge of earth architecture to the world!

Earthily yours,  
The AVEI Team

## Dome at Udavi School

By Dania Aburouss

Located in the central courtyard of Udavi School, under an expansive chikku tree, there stands a small earthen dome, or what the students like to call, "the snake temple".

The Earth Institute was approached by Adelaide, a sculptor and art teacher at Udavi School, an outreach school in Auroville, with the idea to build an earthen structure in the central courtyard of the school. She had worked with earth in the past and wanted her students to have

a similar enriching experience. Together we decided on building a small dome, a permanent structure demonstrating to generations of students the beauty of earthen structures.

In preparation for this project, Adelaide joined the Arches, Vaults, and Domes masonry training course, held at the Earth Institute, to get a feel of the material and to familiarize herself with masonry dome construction. She later on guided her students, a group of eight children between the ages 12 and 14, on how to construct clay models of the dome. They also experimented with clay reliefs and sculptures of different animals to decorate the real-scale dome after its completion.

We decided on having a dome built out of CSEB mini blocks over a small foundation. It would be waterproofed with a lime-earth plaster, onto which the animal reliefs could be created using the same plaster. The foundation was prepared beforehand by the masons, so that the students could start directly with the masonry. Led by Venkatesh, one of the Earth Institute's skilled masons, they learned how to use the compass, laying brick after brick and course after course. The students also learned how to measure and mix the materials to achieve a mortar of proper consistency and how to handle the trowel while laying the blocks. The dome was finished in two days by two alternating



*Students working on the dome at Udavi School*



*Students plastering and decorating the exterior of the dome*

teams. Intrigued students and teachers stopped by occasionally with some questions, or to lend a helping hand.

To allow the dome to settle, the plaster had to wait for another week. The students took care of curing the dome daily in preparation for the plaster, which gave them an insight into how the project needed to be phased to achieve best results. The plaster was applied in two coats, under the guidance of Ravindaran and Vignesh from the Earth Institute. It was a joyful process that drew laughter from the children with every splash of mortar on the dome. The final coat was done the week after, along with the animal reliefs that they had been practicing. A few touch-ups were done afterwards, and the dome was good to go.

The construction was finished in 5 days, spanning over 4 weeks. The inauguration happened shortly after, at the final school celebration, where the students decorated the dome with lamps and flowers, and gave a heart-warming speech in front of their peers and faculty. Pranavraj, an 8th grader participant in this

project, presented how the project unfolded and explained the reason behind the dedication of the dome to the animals. The reliefs that they have created serve as a reminder of how we share this planet with a multitude of creatures that need to be valued and protected. ■



## Joy of Impermanence Social Space

Over the last year, the Earth Institute has been collaborating with Joy of Impermanence (JOI), a group of young people who have come together to build their own affordable housing through a participatory construction process. They have chosen to use only materials and methods that can be either biodegraded or dismantled after five years, to both adopt a spirit of impermanence and to conform to Auroville's town planning. The first community being built is called Anitya, and is located on an undeveloped plot of Auroville land close to the village of Edayan Chavadi.

The social space, a central building where the Anitya community can come together, has just been completed. It combines poured earth concrete foundations with raw rammed earth walls, wattle and daub window sills, and a light roof with steel poles and



*Above: the JOI and AVEI teams;  
Below: construction on the social  
space at Anitya community*



roofing sheets. The exterior walls have been covered with a lime-stabilized earth plaster to protect them from the monsoon climate.

After the Earth Institute had finished the concept design and technical drawings for the building, a rotating crew of AVEI workers joined the JOI team on the construction site through the peak of the hot summer weather in Auroville.

The next objective for the JOI team will be to complete the individual housing units for the community residents. ■



*The roof going onto the social space at Anitya*

### Other Recent Construction Projects



**Renovation of Priya's pottery workshop in Dana completed in January 2019**

An extension of the existing buildings with CSEB and poured earth concrete walls, ferrocement channel roofing, and oxide flooring.

See also **Newsletter Issue 41** for an earlier construction update.



**Terrace extension for house in Dana completed in May 2019**

An RCC slab terrace resting on CSEB columns with oxide flooring on both levels.

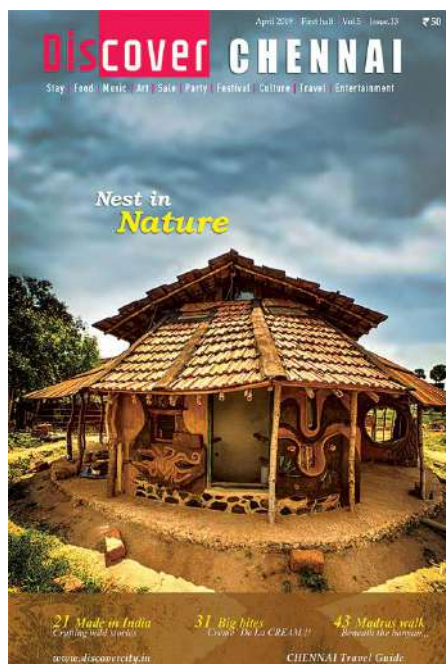
AVEI in the Press

Discover Chennai

The Auroville Earth Institute was included in the cover story “Nest in Nature” in April 2019 edition of the *Discover Chennai* magazine. This monthly magazine explores local cultural and lifestyle events in the Chennai area. The article was accompanied by an image of the Sri Karneswar Nataraja Temple, the pyramidal CSEB temple on the beach in Chinna Kalapet that has become one the Earth Institute’s most well-recognized projects since its construction in 2006.

Read the whole article here:

[https://issuu.com/discovercity/docs/discover\\_travel\\_guide\\_april\\_2019\\_ed/30?ff](https://issuu.com/discovercity/docs/discover_travel_guide_april_2019_ed/30?ff)



# Auroville Today

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## The Auroville Earth Institute working for Auroville, working for the world

As the Auroville community concludes its 50th anniversary year, the Auroville Earth Institute is looking ahead towards its own 30th anniversary milestone in August.

Specialised in sustainable soil-based building techniques, the Earth Institute has become a familiar name in Auroville as a result of construction projects like the Visitors' Centre, Vikas Community Deepamam School and Realization Community. The Earth Institute attracts over 200 students a year who come to its campus as short-term trainees, interns and researchers. At a time when many architects are trying to characterise their buildings as “green” and “sustainable”, the Institute’s expertise is sought by organisations and private individuals around the world because of its proven ability to offer truly low-carbon building technologies, favouring soil and other locally sourced building materials that also engage local economies by providing sustainable livelihoods. To date, the Earth Institute has executed a variety of building projects and training missions in 36 countries and has received 15 national and international awards.

The story of the Earth Institute began in 1989 when HUDCO (the Housing & Urban Development Corporation, Government of India) provided a grant for the creation of a training centre for building technologies and the construction of a visitors' centre in Auroville to showcase sustainable building technologies. Satprem Malini, a French architect who had been working for CR Alere (the International Centre for Earth Building at the Ecole Nationale Supérieure d'Architecture de Grenoble, France) and who had already formed a deep appreciation for Auroville and its spiritual aims, was invited to Auroville by Subram Ayyer and Gilles Gagnon to share his years of experience in the earth-building field. “I didn’t want to be working only on short-term international projects anymore, and so I immediately agreed,” explains Satprem. The design for the Visitors' Centre developed into an ambitious structure incorporating a series of niched elements and domes, all built with compressed stabilised earth blocks and other low-cost sustainable building technologies.



Vault of the Conference Hall at Sharanam Rural Development Centre

actually a task of reconnecting people with their own traditional building methods. “If the discipline of architecture can begin to study the complexity of the vernacular, then we have an infinite palette of sensitive, context-responsive and sustainable solutions to draw from,” Lara explains. India has a rich tradition of earth construction. When asked if the students go on to build with earth, Ayyappan says, “Not all of them, some come for study purposes only. But for every ten students that come, at least one or two will go on to build with earth technologies.” Continually seeking new and improved techniques for earth

### Auroville Today

The Auroville Earth Institute recently featured in a front-page article in the monthly Auroville periodical, *Auroville Today*. Covering the Earth Institute’s thirty year history of research, training, and construction, the article explored the Earth Institute’s development in the context of the international township of Auroville and highlighted its many exemplary contributions to the earthen architecture landscape, in Auroville, India, and the world.

The article can be found here:

<https://www.auroville.org/contents/4639>

### Recent Training Courses

The Earth Institute conducted five weeks of training courses in May and June. The two-week Bioclimatic Earth design studio, co-taught by Omar and Lara, took place in May and attracted 29 students from India, Italy, Germany, and Portugal. Twenty three students primarily from India but also from the UK took part in the week-long ferrocement training course during the first week of June. The following week began the Arches, Vaults, and Domes (AVD) Theory and Masonry courses, which were taught by Lara, Satprem, and Ayyappan. These courses drew a total of 37 students primarily from India but also from Sweden and Australia, who participated in one or both weeks.



During the last week of June, the Earth Institute also gave a three-day program, organized by Auroville Green Practices as a part of their "Sustainable Architecture in Auroville" workshop, for a group of students from Pelita Harapan University in Indonesia. During these three days, the students learned the basics of earthen architecture and had the opportunity to build arches and domes.

In July, three weeks of CSEB training courses on Design, Production, and Masonry will be taking place. ■

**AVEI Training Course Schedule for 2019**

**July**

1st to 6th : CSEB Design  
 8th to 13th : CSEB Production  
 15th to 20th : CSEB Masonry

**September**

2nd to 7th : CSEB Production  
 9th to 14th : CSEB Masonry  
 16th to 21st : AVD Theory  
 23rd to 28th : AVD Masonry

**October**

14th to 28th : Bioclimatic Earth

**November**

4th to 9th : Wind Generator

**December**

2nd to 7th : CSEB Intensive  
 9th to 14th : AVD Intensive

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*Satprem demonstrating the wattle and daub technique at the Joy of Impermanence social space*